the animal was killed and the fluid in the bladder again examined. The authors experimented with ten drugs, including cocaine, carbolic acid, and morphine; all except the last were absorbed. "The practical significance of the experiments is at once apparent, especially in the case of cocaine and carbolic acid. They show that in the local treatment of diseases of the bladder cocaine is only to be used with caution and carbolic acid not at all if severe poisoning is to be avoided."

SURGERY.

UNDER THE CHARGE OF

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A New Radical Operation for Inguinal Hernia.—Basing his departure on fifty-two operations which he has performed by Bassini's method, JONNESCO (*Cent. für Chir.*, March 27, 1897) modifies that operation in the following manner, with the purpose of obliterating not only the inguinal canal, but also the internal abdominal ring, by strengthening the abdominal wall at that point. He has performed this operation with perfect success in three cases:

The incision is the same as in Bassini's operation, commencing two finger-breadths from the pubic spine. The finger is then passed into the canal and its anterior wall divided. The hernia is reduced and the sac separated from the cord; it is much easier to isolate the hernial sac if it is first opened. The sac is ligated as high up as possible and the stump returned into the abdomen after resection

Before the cord is replaced beneath the peritoneum it should be carefully isolated, and care should be taken to see that the entire posterior wall of the inguinal canal is divided down to the peritoneum from the internal to the external ring. The cord is now replaced upon the peritoneum and a series of interrupted sutures introduced with a curved Reverdin needle. The first tissues united are, on the one side, Poupart's ligament, and, on the other, the internal oblique and transversalis aponeuroses. These sutures extend the entire length of the canal, closing the internal abdominal ring and extending to the pubic spine, where a sufficient opening is left to allow the exit of the cord, usually an opening that will admit the tip of the little finger. The second plane of sutures unites the muscular fibres of the internal oblique and transversalis to Poupart's ligament. These stitches take in the lower tissues as well. The third plane of sutures unite the external oblique aponeurosis to Poupart's ligament, the stitches being placed deeply into the other layers. Toward the median line, where there are no fibres of the internal oblique, there are only two layers; here the aponeurosis of the external oblique is united to Poupart's ligament, the stitches including the posterior layer. At the external ring the two pillars of the external oblique are united, the stitches including the posterior layer and an opening being left for the exit of the cord.

The entire canal is thus closed and made firm by contracting scar-tissue.

The skin suture is in two layers, the first taking in the connective-tissue layer, the second approximating the skin edges, the object being to exclude any area where suppuration could take place. An antiseptic compressing-dressing is used to prevent the formation of a hæmatoma of the scrotum.

Sixty-one Cases of Partial and Complete Excision of the Tongue.—WHEELER (*Dublin Journal of Medical Sciences*, April, 1897) says that out of sixty-one operations performed by him for malignant disease, none died from the effects of the operation, save one, a male on whom he operated by Kocher's method modified; he died of asthenia. He did not tracheotomize him.

Of the sixty-one cases, in twenty-nine the disease returned. Many of these operations were performed not with a view to cure, but merely to relieve and remove a foul, sloughing, fetid mass, and thus render existence more tolerable. Twenty-two cases he was not able to trace at all directly himself. He heard indirectly that five were healthy three or four years after operation.

Seven others had had no return of the disease, to his own personal knowledge, one to fifteen years after operation, while three had no return seven, three, and two months after operation.

There is only one prognosis for unoperated lingual carcinoma—death; and a like prognosis for a large number of operated cases. That complete recovery does take place, he believes to be undoubted, as shown by his own cases.

The kindly healing of wounds in the mouth is not due to the bactericidal action of the saliva, but to the outpouring of leucocytes which its presence in these wounds always induces.

He considers it expedient to ligate the external carotid before removing the tongue, tonsils, and part of the palate; but preliminary ligature of the lingual arteries in excision of the tongue, as recommended by Mirault, is not required; there is no hemorrhage from the ranine arteries to cause alarm, and, as the operation upon the tongue is frequently postponed until the wounds for deligating the lingual vessels heal, the disease in the mouth is increasing and may be infecting the patient. The author believes it is good surgery to remove the tongue first and then the diseased glands later, if it is necessary to do the operation in two stages.

The inflammation in the glands usually subsides a little, and the glands can then be more readily removed, and the connective tissue will be a guide to the lymphatic glands deeper in the neck, where the lymphatics directly communicate.

The author has performed all the recent operations, but prefers the thermo-